In the claims:

1. (Original) Process for the synthesis of ceramide-type compounds, characterized in that it includes at least an amide formation step, performed by means of the lipase B-type enzyme of *Candida antartica*, and an esterification step, also performed by means of a lipase-type enzyme, and in that the ceramide-type compounds correspond to the general formula (I):

$$AG \xrightarrow{N} Am-Alc \longrightarrow O \xrightarrow{N} AG'$$
(I)

in which the group Am-Alc figures a C2 to C6 carbon chain, preferably saturated, linear or optionally branched, obtained from an amino-alcohol; X figures a hydrogen atom or a C1 to C4 carbon chain, optionally hydroxylated on the 2' and/or following positions of the amino group; and in which each of the groups AG and AG' figures a C4 to C30 carbon chain, saturated or unsaturated, obtained from a fatty acid or a fatty acid ester; the two groups AG and AG' may be identical or different.

- 2. (Original) Process according to claim 1, characterized in that the amide formation step is carried out under stoechiometric conditions between a fatty acid and/or its ester and an amino-alcohol at a temperature comprised between 40 and 100°C.
- 3. (Currently amended) Process according to claim 1 or claim 2, characterized in that the amide formation is carried out without solvent, at a minimal temperature of about 65°C.
- 4. (Currently amended) Process according to one of the claims 1 to 3, claim 1 characterized in that the amide formation is carried out under a reduced pressure comprised between 1 and 500 mbars and during at least 16 hours.
- 5. (Currently amended) Process according to one of the claims 1 to 4, <u>claim 1</u> characterized in that the esterification is performed by means of the *Rhizomucor miehei* lipase.
- 6. (Original) Process according to claim 5, characterized in that the esterification reaction is carried out with a ratio fatty acid ester/amino-alcohol comprised between 1 and 2.
- 7. (Currently amended) Process according to claim 5 or claim 6, characterized in that the esterification reaction is carried out at a temperature comprised between 40 and 90°C.

- 8. (Currently amended) Process according to one of the claims 5 to 7, claim 5 characterized in that the esterification reaction is carried out without solvent, at a minimal temperature of about 65°C.
- 9. (Currently amended) Process according to one of the claims 5 to 8, claim 5 characterized in that the esterification reaction is carried out under a reduced pressure comprised between 1 and 500 mbars and during at least 18 hours.
- 10. (Currently amended) Process according to one of the claims 1 to 9, claim 1 characterized in that the enzymes used in each step are immobilized on an inert support.
- 11. (Currently amended) Process according to one of the claims 1 to 10, claim 1 characterized in that the amide formation reaction by means of the *Candida antartica* lipase B and the esterification reaction by means of the *Rhizomucor miehei* lipase are both carried out without solvent, optionally simultaneously, at a minimal temperature of about 65°C and under a reduced pressure comprised between 30 and 200 mbars.
- 12. (Currently amended) Process according to one of the claims 1 to 11, claim 1 characterized in that the amino-alcohols are C2 to C6 compounds, preferably saturated, linear or optionally branched and the fatty acids and/or their esters have a C4 to C30, preferably C10 to C22 carbon chain, saturated or unsaturated, optionally hydroxylated.
- 13.(Currently amended) Process according to one of the claims 1 to 12, claim 1 characterized in that the starting amino-alcohol corresponds to formula (IV):

in which:

- n is an integer selected from the numbers 1, 2, 3 and m is an integer selected from the numbers 1, 2, 3,
- X is selected from the group composed of hydrogen and a C1 to C4 carbon chain, optionally hydroxylated on the positions 2' and/or followings of the amino group;
- R1 is selected from the group composed of hydrogen and a C1 to C4 carbon chain, preferably saturated, linear, optionally branched and/or hydroxylated,
- R2 is selected from the group composed of hydrogen, -OH, NH₂ and a C1 to C4 carbon chain, preferably saturated, linear, optionally branched and/or hydroxylated,
- R3 is selected from the group composed of hydrogen, -OH and -CH₂OH,

and in which at least one of the groups R1, R2 or R3 includes a -OH group.

14. (Currently amended) Process according to one of the claims 1 to 13, claim 1 characterized in that the amide formation step is performed before the esterification step.